Growing Tomatoes is Fun!

(yes, even in the Monument area)

Carey Harrington
Colorado Master Gardener

This presentation will be available as a PDF for the next week at careymoonbeam.wordpress.com

Tomato Myth #1

"You can't grow tomatoes here!"

August 31, 2001

August 2003

Starting by Seed

- What You Need (minimally)
  - Germination space (top of fridge or water heater)
  - Potting soil, perlite/vermiculite, containers, tags
  - Seeds
  - Plastic wrap or dome
  - Sunny space for seedlings to grow
- What You Need (if you're really serious!)
  - Plastic shelves, fluorescent fixtures and bulbs, power strip, timer

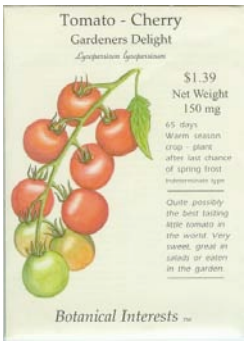
Shelves and Lights

- Set up shelves (usually 3 ft wide)
- Hang fluorescent light fixtures on their adjustable chains (usually 4 ft wide)
- Put in the fluorescent tubes
- Plug fixtures into a power strip
- Set timer for 16 hours and plug it in (plug power strip into timer)

Ta-da!

Choosing the Seeds

- Heirloom vs. Hybrid
- Disease and Pest Resistance
- Size / Types
- Determinate vs. Indeterminate
- Growing Season



Growing Tomatoes is Fun!

Choosing the Seeds

Heirlooms vs. Hybrids

- Heirlooms
  - Many have superior taste (Brandywine and Caspian Pink are favorites)
  - More colors and shapes (Green Zebra, Yellow Pear, Purple Cherokee)
  - Saved seed will come true the next season (open pollinated)
  - Disease and pest resistance **not** bred in
- Hybrids
  - Saved seed will **not** come true the next season
  - Many varieties available
  - Often have disease and pest resistance bred in

Growing Tomatoes is Fun!

Choosing the Seeds

Disease & Pest Resistance

- V=Verticillium Wilt
- F = Fusarium Wilt, race 1
- F2 = Fusarium Wilt, race 2
- N = Nematodes
- A= Alternaria (early) blight
- As= Alternaria stem canker
- Ls= Gray leafspot
- T = Tobacco Mosaic Virus

Examples:
Celebrity (VFF2AsNLsT)
Champion (VFNT)
Dona (VFF2NT)
Early Girl (V)
Rutgers (VFAst?)
Sungold (FT)
etc...

Growing Tomatoes is Fun!

Choosing the Seeds

Types

- Cherries, grapes, minis
  - Examples: Gardener's Delight, Sweet 100s, Juliet, Tiny Tim, Tumbler
- Small to mid-size slicers
  - Examples: Early Girl, Fourth of July, Goliath, Lemon Boy, Champion, Siberia
- Beefsteak/Large slicers
  - Examples: Big Boy/Girl, Park's Whopper, Mortgage Lifter
- Paste
  - Examples: Roma, Polish Linguisa, San Marzano

Growing Tomatoes is Fun!

Choosing the Seeds

Determinate vs. Indeterminate

Tomato Myth #2
"If you want a smaller plant, grow cherry tomatoes!"

- Determinate (Examples: Celebrity, Roma, Siberia, Tumbler)
  - Grows to a certain size and stops (usually still needs support!)
  - All fruit ripens in a short window (one to two weeks)
  - Fruit from determinate varieties are often smaller
- Indeterminate (Examples: Brandywine, Rutgers, Gardener's Delight)
  - Keeps growing as long as temperatures stay above freezing
  - Always needs some type of sturdy support
  - Continually sets and ripens fruit while temps are above freezing

Growing Tomatoes is Fun!

Choosing the Seeds

Growing Season

Tomato Myth #3
"Grow cherry tomatoes because they'll ripen faster!"

- Early season: up to 60 days
  - Examples: Siberia (48 days), Early Girl (57 days), Fourth of July (50 days)
- Mid season: 60 to 79
  - Examples: Champion (62 days), Rutgers (70 days), Gardener's Delight (65 days)
- Late season: 80 +
  - Examples: Brandywine (85 days), Sungella (80 days)

Growing Tomatoes is Fun!

Choosing the Seeds

Carey's Recommendations for Monument area:

Siberia, OP, small-to-medium slicer (3-5 oz), determinate, 48-57 days
Can set fruit down to 38 degrees! (Still freezes at 32 degrees though.)

Early Goliath, Hybrid, medium slicer (8 oz), indeterminate, 58 days
Good size, good taste (better than Early Girl)

Sungold, Hybrid, cherry, indeterminate, 65 days
Great tasting cherry with orange fruit (not overly sweet though...real tomato taste)

Stupice, OP, small salad type (1-2 oz), indeterminate, 52 days
Very sweet with high tolerance to cold (a Czechoslovakian variety)

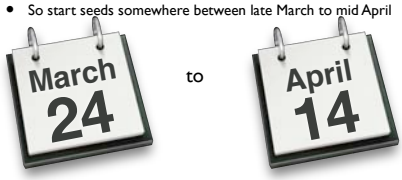
Juliet, Hybrid, grape, indeterminate, 60 days

Tiny Tim, OP, cherry, dwarf determinate, 60 days
For small/hanging baskets, can be easily taken indoors if needed

Growing Tomatoes is Fun!

When to Start Seeds

- Six to eight weeks before setting out
  - Set out after average last frost date, unless using "walls of water" (May 15ish)
  - Even better, set out after night time temps are consistently above 50 degrees (early June)
  - So start seeds somewhere between late March to mid April



to

Growing Tomatoes is Fun!

How to Start Seeds

- Fill small pots or cells with seed starting mix (or potting soil with extra perlite/ vermiculite)
- Write variety names on markers/labels
- Plant two seeds the recommended depth (usually 1/4") and cover

Growing Tomatoes is Fun!

How to Start Seeds

- Cover with plastic wrap or dome
- Put on top of fridge or in some other warm place

Growing Tomatoes is Fun!

How to Start Seeds

- After they sprout, move them under the lights (reset light height, if needed, and remember 16 hours a day of light!)
- If both seeds sprout, snip one (if you can!) or repot into two pots
- Check daily to water and brush
- Fertilize at 1/2 strength weekly **after** they have first real leaves

Growing Tomatoes is Fun!

How to Start Seeds

- Pot up when necessary
  - If you start them too early, you'll have to do this more often!
- Raise the lights as needed
  - Plants should be no more than 2-3" below them
- In mid-May, start giving extras away and getting your planting area prepared

Growing Tomatoes is Fun!

Site Selection & Soil Prep

- 8+ hours of sun
- Amendments to improve texture
  - In fall or early spring, add 1" thick layer of well rotted manure or compost
- Nutrients
  - Prior to planting, add granular 5-10-5 fertilizer as recommended on the package
- Warm up soil
  - Black plastic mulch, raised beds, Walls of Water (or plant early June)

Growing Tomatoes is Fun!

Warming Up the Soil

This is KEY to growing tomatoes in your area!

- Raised beds will warm earlier
- Black plastic mulch
  - 5 mil thickness laid over planting area a few weeks before planting
  - Cut generous holes when ready to plant (don't let plastic touch stem)
- Wall of Water
  - Also starts warming the soil in the planting area
  - Filling these can be fun (ugh) - a warm day, 5+ gallon bucket, and good funnel can help

Growing Tomatoes is Fun!

Pre-Season Extenders

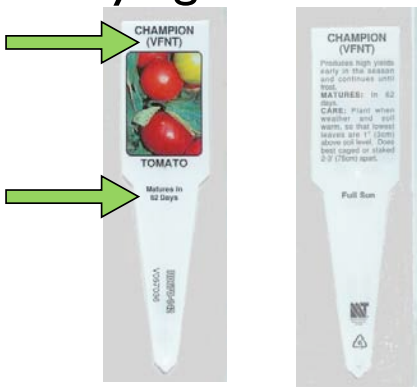
to Prevent Freezing

- Walls of Water
  - Need to be put out about 5-to-7 days before transplanting
  - Can be opened or closed down
  - May be left on well into the season
- Homemade caps
  - Ex. - milk jugs
  - Requires manual daily removal

From *Tantalizing Tomatoes* by Brooklyn Botanic Garden

Growing Tomatoes is Fun!

Buying Tomato Plants



Growing Tomatoes is Fun!

Buying Tomato Plants

Tomato Myth #4
"Buy the biggest plants you can because they'll ripen faster!"

- The ideal plant...
  - is as wide as it is high
  - has a thick stem (pencil size) and dark green foliage
  - has no flowers or already set fruit!

Be sure to ask if it's already been hardened off!

Growing Tomatoes is Fun!

Hardening Off

7-to-10 day process

- Start in windless shade
- Increase time and sun exposure
- Allow to wilt before watering to harden tissue
- Don't allow to freeze!

Growing Tomatoes is Fun!

Transplanting

- Average last frost date - May 15
- Wilt plants before transplanting
- Loosen rootball
- Transplant late in day (avoiding direct sunlight)
- Water and use 1/2 strength balanced fertilizer

Note: If using Walls of Water, pick it up and move it aside, dig the hole, transplant, then move it back over the plant. (And be prepared to get a little wet!)

Growing Tomatoes is Fun!

Spacing

- Individual plants at least 2 ft apart and rows 3 ft apart
- Allow good air circulation

A tomato patch in Vancouver B.C (in May)

Growing Tomatoes is Fun!

Supports

- Cages & stakes vs. not staking
- Most determinate varieties still need at least a small cage
- Indeterminate varieties need large cages

A tomato patch in Colorado Springs (in August)

Growing Tomatoes is Fun!

Culture

- Night time temps above 50 degrees to set fruit (max daytime times about 90 degrees)
- Water consistently from below
  - water to about 10-12 inches deep (but don't keep soggy)
  - soaker hoses work well
  - can also water by hand with hose or watering can
- Mulch
  - after it gets hot, remove any black plastic mulch (if you used it)
  - dried grass clippings are a good choice

Growing Tomatoes is Fun!

Culture

- Pinch suckers on indeterminate vines
- Weed regularly
- Fertilize in midsummer
- If possible, provide hail protection
- Pinch off flowers after August 15

From *Tantalizing Tomatoes* by Brooklyn Botanic Garden

Growing Tomatoes is Fun!

Growing Tomatoes is Fun!

Harvesting

Squirrels may "help" you harvest

- Try to get the stem and leaves with the fruit
- Pick just before completely ripe - shoulders barely softening
- May need to pick early if you have wildlife that like tomatoes

Growing Tomatoes is Fun!

Containers?

- Can be a good choice in shorter season areas
- Use a large container (18" - 24" for most varieties)
- Good quality, peat-based potting soil
- Mix in slow-release fertilizer (i.e. Osmocote)

Growing Tomatoes is Fun!

Containers

- More frequent watering and fertilization
- Still need provide some sort of support
- Resist putting container plants out early
- Consider casters (or rolling tray)

Growing Tomatoes is Fun!

Pests & Diseases

- Early Blight fungus
  - Symptoms show up just after fruit sets
  - Dark spots or rings on old leaves, fruit
  - Lower leaves turn yellow
  - Overhead watering will spread this fungus!
  - Sulphur dust
- Fusarium Wilt fungus
  - Stunted yellow growth
  - Sudden wilt and one shoot or side of plant dying
  - Stays in soil - must move the plants next year!

Growing Tomatoes is Fun!

Pests & Diseases

- Blossom End Rot
  - Soft brown spot on bottom of fruit
  - Caused by inconsistent watering plus excessive cold or heat
- Hornworm
  - Stems stripped of leaves
  - Remove worms from plant by hand or use Bt

Growing Tomatoes is Fun!

End of Season

Tomato Myth #5
"The only thing you can do at the end of the season is make fried green tomatoes!"

- Keep a cover handy for those first early nights below 40 degrees
- Late harvest fruit - wrap in newspaper and store in cool place
- Hang entire plant upside-down in sheltered place like a garage or basement

Growing Tomatoes is Fun!

More Resources

- Colorado State University Extension Fact Sheet #2.949
- *Vegetable Gardening in the Pikes Peak Region* by Colorado State University Extension
- Local nurseries and garden centers
- www.totallytomato.com (info on varieties)
- *Tantalizing Tomatoes* by Brooklyn Botanic Garden
- *In Praise of Tomatoes* by Stephen Shepherd
- *Growing Giant Tomatoes* by Meisner & Langevin
- You Bet Your Tomatoes by Mike McGrath